the amendment of January 24, 2000. As the Examiner noted in the Office Action of September 23, 1999, the wrong set of drawings was inadvertently filed with the original application. As requested by the Examiner, the correct drawings were filed with the amendment dated January 24, 2000. The drawings are objected to because Figs. 1-7 raise new matter; Fig. 6 has no detailed description. The detailed description of Fig. 6 is at page 15, line 22 to page 16, line 7.

Please note page 25, lines 7-9 of the Specification. The drawings, Figs. 1-8, serve only to illustrate subject matter contained in the Specification as originally filed and hence do not raise any new matter. The foreign priority documents are used to claim priority for their contained subject matter. While there is a difference between the drawings of the priority document and Figs. 1-8 that have been submitted, this should be acceptable since Figs. 1-8 conform to the Specification as originally filed. No new matter has been inserted. Favorable reconsideration is requested.

To aid in an understanding of the invention, by way of background, there are two types of displays that are generally known. The first is formed by analogous addressing (e.g., cathode ray tubes). Here, each pixel of the display does not correspond to a specific constructive element. That is, the pixels do not have a dedicated address that is needed to form the element, such as a letter. The second type is discrete addressing (e.g., TFT). Here, each pixel corresponds to a specific constructive element. Each pixel has a specific address.

The subject invention:

1. allows low frequency discrete addressing of the pixels of large flat panel displays. Such displays have an array of a large number of pixels that must have addresses and very fine d.p.i. resolution. For example, compare the text and the picture on a display with the picture and the text in a printed book. The printing in the book is easier to view since the resolution of the printing is higher. The fine (relatively high) d.p.i. resolution of the invention makes it possible to produce holographic picture - where the number of pixels greatly exceeds the number of corresponding constructive elements.

As to the term "constructive element", a pixel corresponding to a point of a viewable picture appears for a time when a signal is applied to a visualizing media (e.g., liquid crystal layer) and then disappears. But there are permanently existing physical structures that deliver a signal to visualizing media (e.g., transistors in TFT displays - one transistor for one color component of a pixel - or intersections of row and column lines in dual scanning displays). Traditional plane panel discrete addressing displays have at least one such physical structure for one pixel. that is, a "constructive element" is the physical element that produces the pixel.

The large number of pixels needed to produce a high resolution cannot be achieved in an LCD display since there is no way to make a corresponding array of a large number of constructive elements. It also is not possible to have a high d.p.i. resolution in cathode ray tube displays since there is no way to make a fine aperture grid for the beam of the tube and a high scanning frequency would have to be used.

2. allows non-linear addressing (details of this are in the U.S. patent 5,801,683. This patent discloses forming the image with several kinds of transformations used for image compression/decompression. (The same holds for image recording.)

To provide a background for some of the claim language, the following explanation of the terms should be considered:

"**Fragment**" - a two dimensional (coordinate) array of pixels comprising a part of an image. The fragments are non-interlaced. That is, pixels of one fragment do not appear around a pixel of another fragment. That is, in neighboring fragments there can be pixels of one fragment in the vicinity of a pixel of another fragment, but they cannot surround it. A plurality of fragments are to be assembled to form an image.

"**Raster element**" - each pixel of a space-time separated raster or functional distribution for time separated raster first formed on complimentary screen in number corresponding to one image fragment and then multiplied (increased in number) to suit the number of whole image. To explain further, consider that you can form a picture on e.g., a paper sheet in various ways. One way is by using very small pieces of another material that are placed close one to one and do not overlap - as a mosaic (each such small piece correspond to a pixel, pixels appear one after one and do not overlap - space-time separated raster). Another way is to form a picture by applying overlapping pieces of e.g., color paper, layer after layer - as an application

(each such layer corresponds to a two periodic function - functional raster element - such elements apply one or another and are just time separated. A numerical procedure for forming function of two arguments as a sum of standard two periodic functions is in common use. The above explains that a "raster element" may be either a pixel or a set of pixels presenting two periodic functions of a standard type.

"**Parallel multiplying**" - a beam corresponding to an initial raster element that is formed by generating means (on a complimentary screen) is to be divided into several parts. An initial raster element is a raster element formed on, for example, a complimentary screen and corresponds to one "initial" fragment (i.e., it is not intended to be directly applied to a medium such as an image display plane but first is to be multiplied (form many copies from one element). What is actually done is to form a raster for one fragment and form many copies from that fragment to form a raster for the complete image. To do this, the beam is multiplied according to the number of scanning fragments to be displayed on the image display plane. The multiplied beams, each beam to be used to form a fragment, is then projected on that plane, so that all fragments are formed at the same time (in parallel). That is, instead of using one beam corresponding to one raster element, the invention uses a number of beams, each corresponding to pertinent raster element in its image fragment.

For example, consider that the pertinent raster element is a pixel formed in the upper left corner of the complimentary screen. After multiplication there is formed a number of pixels on the image display plane, each placed in upper left corner

of the corresponding fragment.

Claims 25, 26, 28-31 and 34-37 are rejected as being anticipated by Furness, III, et al., U.S. 5,467,104.

As discussed above, the independent claims have been amended to clarify the language and make it clear that there is parallel (simultaneous) formation of the fragments of the image.

The Examiner refers to Figs. 5-8 of Furness. The patent describes various modification of an LED array that forms a virtual (i.e., retinal) image with the use of a deflector (microscanner) that continuously changes the angle of the emitted beam to the normal exit direction (see col. 9, lines 27-67, col. 10, lines 1-28). The image is formed in a successive, line by line, or element (pixel) by element, manner.

As distinguished from Furness, the subject invention as set forth in claims 25, 26, 28-31 and 34-37, describes forming/recording the image in a parallel manner in which a plurality of different two dimensional fragments of an image are simultaneously formed, without the use of deflectors (see pages 18-24 of the Specification). Accordingly, the claims define a structure that is different from and has decided advantages over the reference. Therefore, the claims are patentable over Furness.

Claims 25-37 are rejected as being anticipated by Pu, et al., U.S. 5,483,365. Pu is directed to the same type of system as disclosed in Furness. There is no forming/recording the image in a parallel manner in which different two

dimensional fragments of an image are simultaneously formed, without the use of deflectors . Reference is made to Pu, column 2, line 63-column 3, line 48. See also pages 18-24 of the Specification; and the Remarks in the Amendment to the Office Action of 9/23/99).

In Paragraph 1 of the Office Action of June 13, 2000, the Examiner appears to agree that neither Pu nor Furness discloses a method of parallel scanning.

The claims presented are broad to the extent that they cover a method for parallel image forming/recording that implies the step of multiplying raster elements (i.e., splitting one element corresponding beam into a number of beams to project that number on the image plane in a parallel way). The claims also cover the concept of a raster multiplying system in a corresponding device. These features are unique and not found in the cited prior art patents.

Please note page 25, lines 10-11 of the Specification. The embodiment presented in the Specification are illustrative and are not the only possible ones. The claims are formulated to incorporate all the possible embodiments that are in tune with those described and are not obvious from the existing technology level or disclosed in the cited patents.

Accordingly, the foregoing amply demonstrates that applicant has not switched the invention as set forth in the claims now on file from those originally presented.

The amendment should be entered since it places the application in

condition for allowance. It does not raise any new issues. It principally makes amendments to clarify the language.

If the amendment is not entered as placing the application in condition for allowance, then its entry is requested for purposes of appeal.

Prompt and favorable action is requested.

Respectfully submitted,

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